

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

Terves, LLC,)	
)	Case No. 1:19-cv-01611-DCN
Plaintiff,)	
)	Judge Donald C. Nugent
v.)	
)	
Yueyang Aerospace New Materials Co. Ltd.)	
et al.)	
)	
Defendants.)	

Terves' Trial Brief

Contents

(a) Statement of Facts 3

(b) Controlling Law 5

(c) Proposed Witness List 7

(d) Plaintiff’s Exhibit Index 8

(e) Evidentiary Issues Likely to Arise at Trial 28

(f) Proposed Voir Dire Questions 29

(g) Proposed Jury Instructions 31

(a) Statement of Facts

This is a patent infringement case. Terves, a Euclid, Ohio company, owns a series of U.S. patents in the field of dissolvable magnesium. Terves' patents include U.S. Patent Nos. 10,329,653 (the "'653 patent") and 10,689,740 (the "'740 patent"), which issued on June 25, 2019, and June 23, 2020, respectively. Terves manufactures and sells a family of dissolvable magnesium products covered by the '653 and '740 patents under the *TervAlloy* brand name.

Defendants Nick Yuan, a Chinese citizen residing in Canada, and his company Ecometal, Inc., a Canadian company (together, "Ecometal") buy infringing dissolvable cast magnesium from China and import them into the United States. A company called Magnesium Machine, LLC ("MMP") buys the dissolvable magnesium and machines it into fracking tools (*e.g.*, plugs, balls, and sleeves) and sells them to downstream customers—customers that would have purchased Terves' patented *TervAlloy* fracking tools but-for Ecometal's infringement.

The Court determined that seven Ecometal dissolvable magnesium materials infringe the '653 and '740 patents: AJM006, AJM010, AJM012, AJM016, AJM017, AJM018, and AJM023. (Order Granting Summary Judgment, ECF #178, at 9-12.) The Court also granted summary judgment of no-invalidity as to claims 2, 3, 9, 14, 15, 18-20, 23, 26, 27, 30, 31, 34, 35, 38, 39, 42, 46-47, 50, 52-54, 56-61, 64, 66, 67, and 76 of the '653 patent and claims 3-5, 8-11, 13, 16-17, 20-47, 51-69, 76-93, and 95-103 of the '740 patent. (*Id.* at 14.)

During expert discovery and through a supplemental report, Terves' expert, David Haas, opined that Terves' damages amounted to \$1.8 million in lost profits from the sales of infringing materials, most of which were to common customer KLX Energy. Ecometal never filed a rebuttal report during expert disclosure nor did it depose Mr. Haas.

Following the Court's summary judgment ruling of infringement and no invalidity of the unchallenged claims, the parties stipulated to the withdrawal of claims and defenses related to the remaining claims, (ECF #185.) The sole remaining issues for trial are: (1) damages for Ecometal's infringement of the '653 and '740 patents; and (2) whether Ecometal's infringement was willful.¹

¹ The parties dispute whether the Court's Summary Judgment Order (ECF #178) ruled that Nick Yuan was an infringer together with Ecometal. Terves believes that it does for reasons explained in the parties' April 20, 2022 Joint Statement (ECF #187). Terves will prove Yuan is an infringer at trial if the Court agrees with Yuan, and thus that would be a third issue for trial depending on how the Court resolves that issue.

(b) Controlling Law

I. Damages:

Damages for patent infringement are governed by 35 U.S.C. § 284. That section states:

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

When the damages are not found by a jury, the court shall assess them. In either event the court may increase the damages up to three times the amount found or assessed. Increased damages under this paragraph shall not apply to provisional rights under section 154(d).

The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.

(Emphasis added.)

A. Lost Profits

Terves may establish lost profit damages by satisfying the four *Panduit* factors:

1. Demand for the patented product;
2. No available, acceptable, non-infringing substitute products;
3. Manufacturing and marketing capabilities to exploit the demand; and
4. The amount of profit it would have made but for the infringement.

Panduit Corp. v. Stahl Bros. Fibre Works, Inc., 575 F.2d 1152, 1156 (6th Cir. 1978); *Yarway Corp. v. Eur-Control USA, Inc.*, 775 F.2d 268, 275 (Fed. Cir. 1985) (citing to *Panduit* factors).

B. Reasonable Royalties

Per 35 U.S.C. § 284, a patent holder is *at least* entitled to reasonable royalties to compensate it for infringement. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009) (“A reasonable royalty is, of course, ‘merely the floor below which damages shall not

fall.”); *see also* 35 U.S.C. § 284 (“the court shall award ... in no event less than a reasonable royalty”). Because of the mandatory nature of at least a reasonable royalty award, “[i]f a patentee’s evidence fails to support its specific royalty estimate, the fact finder is still required to determine what royalty is supported by the record.” *Apple v. Motorola*, 757 F.3d 1286, 1327-28 (Fed. Cir. 2014). Indeed, a “zero” reasonable royalty would only be justified where the evidence shows that the patent owner “would have been willing to accept no payment for [defendant’s] infringement”—an extremely rare occurrence. *Id.*

The most common approach to calculating a reasonable royalty is the hypothetical negotiation or “willing licensor-willing licensee” approach to ascertain the royalty the parties would have agreed to had they successfully negotiated an agreement just before the infringement began. *Lucent*, 580 F.3d at 1324 (citing *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F.Supp. 1116, 1120 (S.D.N.Y.1970)). Among the facts considered in this analysis are “what plaintiff’s property was, to what extent defendant has taken it, its usefulness and commercial value as shown by its advantages over other things and by the extent of its use, and the commercial situation.” *Panduit*, 575 F.2d at 1159.

II. Willful Infringement

To establish willful infringement, Terves must show defendants’ “infringement was deliberate or intentional.” *Eko Brands, LLC v. Adrian Rivera Maynez Enterprises, Inc.*, 946 F.3d 1367, 1378 (Fed. Cir. 2020).

(c) Proposed Witness List

Terves intends to call the following witnesses at trial:

1. **Andrew Sherman:** Mr. Sherman is CEO of Terves and a co-inventor for the '653 and '740 patents. Areas of testimony include Terves' business, Terves' sales, the state of the oil and gas industry before and after Terves' inventions, conception and commercialization of the patents, and the harm suffered by Terves as a result of Ecometal's infringement.
2. **Brian Doud:** Mr. Doud is COO of Terves and a co-inventor for the '653 and '740 patents. Areas of testimony include conception and commercialization of the patents and the harm suffered by Terves as a result of Ecometal's infringement.
3. **Anupam Gildyal:** Mr. Gildyal is National Sales Manager for Terves. Areas of testimony include Terves' business, Terves' patented products, and Terves' sales.
4. **Nick Yuan:** Nick Yuan is a defendant in this case and the sole employee of defendant Ecometal. Areas of testimony include Ecometal and its business, MMP, and the accused product.
5. **Loren Swor:** Mr. Swor is the Managing Partner of MMP. Areas of testimony include MMP's business, its sales, and the accused produced.
6. **Brian Wilkinson:** Mr. Wilkinson is Mr. Swor's partner at MMP. Areas of testimony include MMP's business, its sales, and the accused produced.
7. **David Haas:** Mr. Haas is Terves' damages expert. He will testify as to the damages Terves suffered as a result of Ecometal's infringement.

(d) Plaintiff's Exhibit Index

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
1			Terves Employees
2			Magnesium Billet (physical and picture copy)
3			Dissolvable Frack Plug (physical and picture copy)
4			Dissolvable Ball (physical and picture copy)
5			Video of Slag [TER_012656] http://www.tervesinc.com/category/post-format-video/
6			Video of Pouring [TER_012655] http://www.tervesinc.com/category/post-format-video/
7			Video of Extrusion Process "Billet Load Loop" [TER_012652] http://www.tervesinc.com/category/post-format-video/
8			Fracking Picture
9			Video of Dissolving Plug TER-012688 http://www.tervesinc.com/category/post-format-video/

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
10			Video of Dissolving Frac Ball TER-12717 http://www.tervesinc.com/category/post-format-video/
11			Plastic Plug Picture
12			Plastic chips picture
13			Vial of Nickel Coated Graphite Powder (physical and picture copy)
14			United States Patent No. 10,329,653
15			United States Patent No. 10,689,740
16			2014 Nortec Innovation Award (physical and picture copy)
17			2015 Frost and Sullivan Manufacturing Leadership Award (physical and picture copy)
18			Oilfield Technology Magazine Article (physical and picture copy)
19			Weatherford/Crain's Award for Revenue to 2018 (physical and picture copy)
20			Bills of Lading for "Ecometal MMP"
21			Summary Table of Bills of Lading
22			No Exhibit
23			BD Sales 2013-2018 YTD 2019 by Customer [TER-012663]
24			90/014,795 Notice of Intent to Issue a Reexam Certificate
25			PTAB Decision Denying IPR of '653 Patent
26			No Exhibit

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
27			No Exhibit
28			Elemental Composition Tables
29			Dissolution Photos Exhibit
30			Dissolution Rates
31			SEM EDS Testing AJM Composites
32			F – Diagrams for Mg-Ni
33			Testing Data Excel Worksheet TER_012623
34			No Exhibit
35			Upstream Technology Article TER_012642
36			Haas Exhibit 5 FRE 1006 Summary
37			Haas Exhibit 5 Supporting Documents
38			Haas Exhibit 5.1 FRE 1006 Summary
39			Haas Exhibit 5.1 Supporting Documents
40			Haas Exhibit 5.2 FRE 1006 Summary
41			Haas Exhibit 5.2 Supporting Documents
42			Haas Exhibit 5.3 FRE 1006 Summary
43			Haas Exhibit 5.3 Supporting Documents
44			Haas Supplemental Exhibit 6 FRE 1006 Summary
45			Haas Supplemental Exhibit 6 Supporting Documents
46			Haas Supplemental Exhibit 7.2 FRE 1006 Summary
47			Haas Supplemental Exhibit 7.2. Supporting Documents
48			Haas Supplemental Exhibit 8 FRE 1006 Summary

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
49			Haas Supplemental Exhibit 8 Supporting Documents
50			Haas Supplemental Exhibit 9 FRE 1006 Summary
51			Haas Supplemental Exhibit 9 Supporting Documents
52			01-10-20 Yuan's Answer to First Set of Interrogatories (Ex. 209 to Yuan Deposition)
53			02-21-20 Ecometal's Answer to PI Related Interrogatories (Ex. 210 to Yuan Deposition)
54			02-21-21 Yuan's Supplemental Answers to First Set of Interrogatories (Ex. 211 to Yuan Deposition)
55			01-10-20 Ecometal's Answers to Plaintiff's First Set of Interrogatories
56			NorTech Award TER_012643
57			Scalerator Recognition TER_012644
58			Weatherhead Award TER_012645
59			Crain's Weatherhead TER_012646
60			Nortek Award Video TER_012653 http://www.tervesinc.com/category/post-format-video/
61			Dissolution Rates Video TER_012654 http://www.tervesinc.com/category/post-format-video/
62			Complaint
63			First Amended Complaint
64			Answer to First Amended Complaint
65			Second Amended Complaint

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
66			Bill of Lading Showing Magnesium alloy imported from China until the U.S. on 02-03-2019 (Ex. 4 to Second Amended Complaint)
67			Answer and Counterclaims to the Second Amended Complaint
68			Excerpts of Redacted Transcript from Seizure Hearing (Ex. 13 to Answer and Counterclaims to Second Amended Complaint)
69			Amended Answer and Counterclaims to the Second Amended Complaint
70			Terves' Answer to Counterclaim
71			Terves' Motion for Summary Judgment
72			Terves' Memorandum in Support of Motion for Summary Judgment
73			Excerpts of Brian Turung Deposition (Ex. 1 to Terves' Motion for Summary Judgment)
74			Terves' Granted Chinese Patent (Ex. 2A to Terves' Motion for Summary Judgment)
75			Terves' Opposition to Amend Motion for Summary Judgment
76			Excerpts from prosecution history for '653 patent) (Ex. B to Terves' Opposition to Amend Motion for Summary Judgment)
77			Excerpts from prosecution history for '740 patent) (Ex. C to Terves' Opposition to Amend Motion for Summary Judgment)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
78			Excerpts from Turung depo) (Ex. D to Terves' Opposition to Amend Motion for Summary Judgment)
79			Excerpts from patent showing cited references) (Ex. E to Terves' Opposition to Amend Motion for Summary Judgment)
80			Terves' Reply in Support of Motion for Summary Judgment
81			Cited sections of MPEP (Ex. 1 to Terves' Reply in Support of Motion for Summary Judgment)
82			Ecometal's Supplemental Brief in Support of Amended Motion for Summary Judgment
83			Turung Rough Transcript 01-12-22 (Ex. 1 to Ecometal's Supplemental Brief in Support of Amended Motion for Summary Judgment)
84			Turung Depo Transcript 10-12-21 (Ex. 2 to Ecometal's Supplemental Brief in Support of Amended Motion for Summary Judgment)
85			Turung Errata Sheet (Ex. 3 to Ecometal's Supplemental Brief in Support of Amended Motion for Summary Judgment)
86			Search Report submitted by Turung (Ex. 4 to Ecometal's Supplemental Brief in Support of Amended Motion for Summary Judgment)
87			Terves' Response to Amended Motion for Summary Judgment

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
88			Dr. Dana J. Medlin, Ph.D., P.E. FASM Declaration in Support of Opp to Mot for PI Dated 07-02-2020
89			Metallic Materials Specification Handbook re Commercially Pure Magnesium (Ex. 7 to Medlin Declaration Dated 07-02-2020)
90			Dr. Dana J. Medlin, Ph.D., P.E. FASM Expert Report Dated 07-27-2021
91			Frapp '035 (Attached to Medlin Expert Report Dated 07-27-21)
92			Frapp '118 (Attached to Medlin Expert Report Dated 07-27-21)
93			Salnikov '022 (Attached to Medlin Expert Report Dated 07-27-21)
94			Salnikov '0292 (Attached to Medlin Expert Report Dated 07-27-21)
95			Frack '157 (Attached to Medlin Expert Report Dated 07-27-21)
96			Huitt '959 (Attached to Medlin Expert Report Dated 07-27-21)
97			Oxford '936 (Attached to Medlin Expert Report Dated 07-27-21)
98			Jin '86 (Attached to Medlin Expert Report Dated 07-27-21)
99			Importance of Tensile Test Standards (Attached to Medlin Expert Report Dated 07-27-21)
100			ASM Intro to Tensile Testing (Attached to Medlin Expert Report Dated 07-27-21)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
101			ASTM B557-15 (Attached to Medlin Expert Report Dated 07-27-21)
102			ASTM E8 E8M – 21 (Attached to Medlin Expert Report Dated 07-27-21)
103			Dr. Dana J. Medlin, Ph.D., P.E. FASM Non-Infringement Report Dated 08-27-2021
104			Dr. Dana J. Medlin, Ph.D., P.E. FASM Deposition taken on 5-21-20
105			Dr. Dana J. Medlin Deposition taken on 10-15-21
106			Letter re retainer agreement dated 01/14/20 (Ex. 701 to Medlin Deposition taken on 10-15-21)
107			Letter re Retainer Agreement dated 06/18/21 (Ex. 702 to Medlin Deposition taken on 10-15-21)
108			7-19-21 Email re final expert report discussion (Ex. 705 to Medlin Deposition taken on 10-15-21)
109			I. S. Salnikov Method for completing oil wells (Ex. 706 to Medlin Deposition taken on 10-15-21)
110			6-17-21 Email re does Medlin agree with contentions (Ex. 707 to Medlin Deposition taken on 10-15-21)
111			Email re chemical analysis (Ex. 708 to Medlin Deposition taken on 10-15-21)
112			X-ray Fluorescence Analysis Report (Ex. 709 to Medlin Deposition taken on 10-15-21)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
113			Email re corrosion testing and EDS (Ex. 710 to Medlin Deposition taken on 10-15-21)
114			Email re corrosion testing (Ex. 711 to Medlin Deposition taken on 10-15-21)
115			SEM image (Ex. 712 to Medlin Deposition taken on 10-15-21)
116			EDS scans (Ex. 713 to Medlin Deposition taken on 10-15-21)
117			5-21-19 Test Report from Metals Engineering re FED-STD-151B (Ex. 714 to Medlin Deposition taken on 10-15-21)
118			5-21-19 Test Report from Metals Engineering re CR, ASTM B557-15 (Ex. 715 to Medlin Deposition taken on 10-15-21)
119			Laboratory Report EAR Controlled Data (Ex. 716 to Medlin Deposition taken on 10-15-21)
120			Employee photo 1 TER_012624
121			Employee photo 2 TER_012625
122			Employee photo 3 TER_012626
123			Employee photo 4 TER_012627
124			Employee photo 5 TER_012628
125			Employee photo 6 TER_012629
126			Employee photo 7 TER_012630
127			Employee photo 8 TER_012631
128			Employee photo 9 TER_012632

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
129			Employee photo 10 TER_012633
130			Employee photo 11 TER_012634
131			Employee photo 12 TER_012635
132			Employee photo 13 TER_012636
133			Employee photo 14 TER_012637
134			Employee photo 15 TER_012638
135			Employee photo 16 TER_012639
136			Employee photo 17 TER_012640
137			Employee photo 18 TER_012647
138			Employee photo 19 TER_012648
139			Employee photo 20 TER_012649
140			Lee A. Swanger, Ph.D., P.E. Declaration / Reported Dated 04-28-2020
141			Swanger Curriculum Vitae (Ex. A to Dec/Report Dated 04-28-2020)
142			Documents and Items Considered (Ex. B to Dec/Report Dated 04-28-2020)
143			Elemental Composition Test Results (Ex. D to Dec/Report Dated 04-28-2020)
144			Diagrams of Mg-Ni and Mg-Cu (Ex. E to Dec/Report Dated 04-28-2020)
145			Claims Analysis Ecometal Alloy AJM 006 (Ex. F to Dec/Report Dated 04-28-2020)
146			Claims Analysis Ecometal Alloy AJM 010 (Ex. G to Dec/Report Dated 04-28-2020)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
147			Claims Analysis Ecometal Alloy AJM 012 (Ex. H to Dec/Report Dated 04-28-2020)
148			Claims Analysis Ecometal Alloy AJM 016 (Ex. I to Dec/Report Dated 04-28-2020)
149			Claims Analysis Ecometal Alloy AJM 017 (Ex. J to Dec/Report Dated 04-28-2020)
150			Claims Analysis Ecometal Alloy AJM 018 (Ex. K to Dec/Report Dated 04-28-2020)
151			Claims Analysis Ecometal Alloy AJM 023 (Ex. L to Dec/Report Dated 04-28-2020)
152			Lee Swanger Claim Construction Rebuttal Reported Dated 05-04-2020
153			Documents and Items Considered (Ex. B to Claim Construction Rebuttal Report Dated 05-04-2020)
154			Reference tests with Definitions (Ex. E to Claim Construction Rebuttal Report Dated 05-04-2020)
155			Lee Swanger Supplemental Report '740 Patent Dated 08-06-2020
156			Claims Analysis Ecometal AJM 006 (Ex. B to Swanger Supplemental Report '740 Patent dated 08-06-2020)
157			Claims Analysis Ecometal AJM 010 (Ex. C to Swanger Supplemental Report '740 Patent dated 08-06-2020)
158			Claims Analysis Ecometal AJM 012 (Ex. D to Swanger Supplemental Report '740 Patent dated 08-06-2020)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
159			Claims Analysis Ecometal AJM 016 (Ex. E to Swanger Supplemental Report '740 Patent dated 08-06-2020)
160			Claims Analysis Ecometal AJM 017 (Ex. F to Swanger Supplemental Report '740 Patent dated 08-06-2020)
161			Claims Analysis Ecometal AJM 018 (Ex. G to Swanger Supplemental Report '740 Patent dated 08-06-2020)
162			Claims Analysis Ecometal AJM 023 (Ex. H to Swanger Supplemental Report '740 Patent dated 08-06-2020)
163			Claims Analysis Ecometal AJM 006, 010, 012, 016, 017, 018, and 023 (Ex. I to Swanger Supplemental Report '740 Patent dated 08-06-2020)
164			Lee A. Swanger, Ph.D., P.E. Rule 26 Rebuttal Report Dated 10-06-20
165			Al-Mg Binary Phase Diagram (Ex. A to Swanger Rebuttal Report Dated 10-06- 20)
166			Lee Swanger Rule 26 Report Dated 07- 27-21
167			Documents and Items Considered (Ex. B to Swanger Rule 26 Report Dated 07- 27-21)
168			Summary of Optical Microscope Observations (Ex. D to Swanger Rule 26 Report Dated 07-27-21)
169			Extruded Magnesium Hardness Evaluation (Ex. E to Swanger Rule 26 Report Dated 07-27-21)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
170			Analysis of Infringement of '653 Patent (Ex. G to Swanger Rule 26 Report Dated 07-27-21)
171			Analysis of Infringement of '740 Patent (Ex. H to Swanger Rule 26 Report Dated 07-27-21)
172			Lee A. Swanger, Ph.D., P.E. Deposition taken on 06-03-20
173			Terves Preliminary Construction and Evidence (Ex. 3 to Swanger Deposition taken on 06-03-20)
174			Lee A. Swanger, Ph.D., P.E. Rebuttal Report Dated 10-21-2021 (Ex.
175			Documents and Items Considered (Ex. B to Swanger Rebuttal Report Dated 10-21-21)
176			Prior Testimony of Swanger (Ex. C to Swanger Rebuttal Report Dated 10-21-21)
177			Textbooks known to a POSITA (Ex. D to Swanger Rebuttal Report Dated 10-21-21)
178			Lee Swanger, Ph.D., P.E. Deposition taken on 10-12-20
179			Claim Charts (Ex. 38 to Swanger Deposition taken on 10-12-20)
180			Yeuyang Yuhua Processes (Ex. 42 to Swanger Deposition taken on 10-12-20)
181			Expert Report of David A. Haas dated 07-27-2021
182			Documents reviewed and considered to expert report (Ex. 2 to Haas Expert Report)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
183			Damages Summary – 6/25/19-6/30/21 (Ex. 3 to Haas Expert Report)
184			Terves 2021 Gross Margin on Sales to KLX (Ex. 4 to Haas Expert Report)
185			Terves Lost Revenue by Customer (Ex. 5 to Haas Expert Report)
186			MMP Customer Transaction Level Sales Data – Feb. 2018 to June 2020 (Ex. 5.1 to Haas Expert Report)
187			MMP Customer Transaction Level Sales Data – June 2020 to June 2021 (Ex. 5.2 to Haas Expert Report)
188			MMP Customer Transaction Level Sales Data - Jet (Ex. 5.3 to Haas Expert Report)
189			Terves Sales to KLX – By Part 2021 (Ex. 6 to Haas Expert Report)
190			Terves Incremental Operating Expense Calculation (Ex. 7 to Haas Expert Report)
191			Terves Incremental Operating Expense Accounts (Ex. 7.1 to Haas Expert Report)
192			Terves Income Statements – 2013 to 2020 (Ex. 7.2 to Haas Expert Report)
193			Terves But-For Capacity Analysis (Ex. 8 to Haas Expert Report)
194			Ecometal Sales to MMP (Ex. 9 to Haas Expert Report)
195			Supplemental Expert Report of David A. Haas dated 04-04-22

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
196			Haas Curriculum Vitae (Ex. 1 to Haas Supplemental Expert Report)
197			Documents reviewed and considered to supplemental expert report (Ex. 2 to Haas Supplemental Expert Report)
198			Damages Summary – 06/25/19-06/30/21 (Ex. 3 to Haas Supplemental Expert Report)
199			Terves 2021 Gross Margin on Sales to KLX (Ex. 4 to Haas Supplemental Expert Report)
200			Terves Sales to KLX – By Part – 2021 (Ex. 6 to Haas Supplemental Expert Report)
201			Terves Incremental Operating Expense Calculation (Ex. 7 to Haas Supplemental Expert Report)
202			Terves Incremental Operating Expense Accounts (Ex. 7.1 to Haas Supplemental Expert Report)
203			Terves Income Statements – 2013 to 2021 (Ex. 7.2 to Haas Supplemental Expert Report)
204			Terves But-For Capacity Analysis (Ex. 8 to Haas Supplemental Expert Report)
205			Ecometal Sales to MMP (Ex. 9 to Haas Supplemental Expert Report)
206			Jet – Orders Tracking
207			KLX Energy Services 01-21-21 to 12-31-21
208			KLX Margin Report by Product 07-21-21

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
209			KLX Margin Report by Sales Order 07-21-21
210			MM Sales by Customer 06-16-20 to 06-25-21
211			MM Sales by Detail 06-16-20 to 06-25-21
212			BD Sales 2013-2018 YTD 2019 by Customer
213			Part Purchase History by So-Date
214			Sales 01-01-14 to 07-26-21
215			Terves Financials YTD 12-31-20
216			Terves Income YTD 2021
217			Loren Swor Deposition taken 06-24-21
218			02-02-15 Magnesium Machine Purchase Order (Ex. 105 to Swor Deposition)
219			01-19-17 Email string regarding well positioned with prior art (Ex. 111 to Swor Deposition)
220			Bill of Lading (Ex. 117 to Swor Deposition)
221			01-19-18 Email between Swor and Yuan (Ex. 137 to Swor Deposition)
222			07-12-18 Email regarding bidding (Ex. 149 to Swor Deposition)
223			MM Labeled Sales Records (Ex. 172 to Swor Deposition)
224			Brian Wilkinson Deposition taken 06-25-21

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
225			Draft Manufacturing Agreement (Ex. 96 to Wilkinson Deposition)
226			06-23-16 Email re Draft Manufacturing Agreement (Ex. 97 to Wilkinson Deposition)
227			First Amendment to Draft Manufacturing Agreement (Ex. 98 to Wilkinson Deposition)
228			Subpoena and Notice of Magnesium Machines (Ex. 100 to Wilkinson Deposition)
229			02-02-15 Magnesium Machines Purchase Order (Ex. 105 to Wilkinson Deposition)
230			Email string re port plugs (Ex. 113 to Wilkinson Deposition)
231			Bill of Lading (Ex. 117 to Wilkinson Deposition)
232			08-23-19 Email re five-year agreement extension (Ex. 161 to Wilkinson Deposition)
233			Nick Yuan Deposition Taken 06-30-21
234			Notice of 30(B)(6) Deposition to Ecomental Inc. (Ex. 201 to Yuan Deposition)
235			Nick Yuan Vice Chairman Business Card (Ex. 202 to Yuan Deposition)
236			Loren email re Manufacturing Agreement (Ex. 203 to Yuan Deposition)
237			Draft Manufacturing Agreement (Ex. 204 to Yuan Deposition)

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
238			01-27-21 Invoice (Ex. 205 to Yuan Deposition)
239			07-18-19 Purchase Order (Ex. 206 to Yuan Deposition)
240			Swor Executed First Amendment to Manufacturing Agreement (Ex. 207 to Yuan Deposition)
241			07-04-19 Purchase Order (Ex. 208 to Yuan Deposition)
242			Yuan Declaration (Ex. 212 Yuan to Deposition)
243			Email String re future patents (Ex. 213 to Yuan Deposition)
244			01-08-18 Email re solid position against the patent (Ex. 214 to Yuan Deposition)
245			Terves Sales 01-01-2017 to 03-31-22
246			Terves Sales 01-01-2017 to 04-13-22
247			Video TER-12718 Sherman Description of Terves Technology http://www.tervesinc.com/category/post-format-video/
248			02-21-21 Ecometal's Supplemental Answers to Plaintiff's First Set of Interrogatories
249			Terves' Brochures
250			Terves Annual Revenue Summary
251			Swanger Ecometal AJM Sample AJM018
252			Swanger Ecometal AJM Sample AJM012

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
253			Swanger Ecometal AJM Sample AJM016
254			Swanger Ecometal AJM Sample AJM023
255			Swanger Ecometal AJM Sample AJM017
256			Swanger Ecometal AJM Sample AJM010
257			Swanger Ecometal AJM Sample AJM006
258			Swanger Ecometal AJM Sample AJM017 in Mount
259			Swanger Ecometal AJM Sample AJM023 in Mount
260			Swanger Ecometal AJM Sample AJM018 in Mount
261			Swanger Ecometal AJM Sample AJM012 in Mount
262			Swanger Ecometal AJM Sample AJM018 in Mount
263			Swanger Ecometal AJM Sample AJM016 in Mount
264			Swanger Ecometal AJM Sample AJM010 in Mount #2
265			Swanger Ecometal AJM Sample AJM010 in Mount
266			Swanger Ecometal AJM Sample AJM006 in Mount
267			Swanger Ecometal AJM Sample AJM 12-1 post-dissolution test

<u>Exhibit</u>	<u>Date Marked</u>	<u>Date Admitted / Stipulated</u>	<u>Description</u>
268			Swanger Ecometal AJM Sample AJM 6-2 post-dissolution test
269			Swanger Ecometal AJM Sample AJM 17-2 post-dissolution test
270			Swanger Ecometal AJM Sample AJM 10-1 post-dissolution test
271			Swanger Ecometal AJM Sample AJM 18-2 post-dissolution test
272			Swanger Ecometal AJM Sample AJM 16-3 post-dissolution test
273			Swanger Ecometal AJM Sample AJM 23-2 post-dissolution test
274			Swanger Ecometal AJM Sample AJM018-3 post-dissolution test
275			Swanger Ecometal AJM Sample AJM 23-2 post-dissolution test
276			Casting Trial 2-18-14 TER-003607
277			Development Internal Casting Trial TER-003608
278			Steel mold AZ31 Cooling Rate TER-003609
279			Lab Notebook TER-012623
280			Testing Documents TER-002999
281			Testing TER-012623

(e) Evidentiary Issues Likely to Arise at Trial

1. Ecometal arguments regarding invalidity: Terves anticipates that Ecometal will spend time at trial arguing invalidity to defend itself on the willfulness claim. The USPTO has rejected Ecometal's invalidity grounds. Further, Ecometal's expert didn't bother to assert invalidity on the Unchallenged Claims as determined by the Court in granting summary judgment of no invalidity (ECF #178 at 14). This is a dead, baseless issue that the Court should now allow to proceed at trial.

2. Unnecessary challenges to routine financial documents: Terves intends to introduce summaries of financial documents, which is allowed under Fed. R. Evid. 1006. For efficiency, Rule 1006 allows a party to create a summary of voluminous records, such as invoices, to prevent a party from having to introduce each invoice as a separate exhibit and then add them up or force a jury to do so. To expedite the trial in accordance with Rule 1006, Terves provided Ecometal with notice of these summaries and to seek a stipulation from Ecometal. Thusfar, Ecometal has not indicated whether it will stipulate to Terves' summaries.

(f) Proposed Voir Dire Questions

Question for the Court to ask:

1. Now, as we begin the questions, do any of you have trouble reading or understanding the English language?
2. Do any of you have a physical difficulty such as hearing or sight that would make it difficult for you to be a juror in this case?
3. Do any of you know me or my courtroom staff [state names]?
4. Now I will introduce the parties to you. Do you know any of the parties to this lawsuit?
Terves, LLC; Ecometal Inc.; Nick Yuan.
5. Do you know any of the attorneys involved in this lawsuit? David Cupar, Matthew Cavanagh, Andrew Gordon-Seifert, John Lewis, Ed White, Martin High.
6. The parties may call, but are not required to call, the following witnesses. Please let me know if you know any of them: Andrew Sherman, Brian Doud, Anupum Ghildyal, Dr. Lee Swanger, David Haas, Nick Yuan, Steven Barela, Loren Swor, and Brian Wilkinson.
7. Have you ever heard of a product known as Terves TervAlloy dissolvable magnesium? If so, what do you know about it?
8. What is your occupation?
 - a. if working in legal field, what do you do?
 - b. if working in chemical field, what do you do?

c. If working in the manufacturing field, what do you do?

9. If empaneled, you will be asked to decide this case solely on the evidence provided in this courtroom, not on sympathy or prejudice or outside knowledge you may have, and on the law, which I, the judge, will instruct you on. If there is any reason you cannot perform this duty in this case, please raise your hand.

(g) Proposed Jury Instructions

PRELIMINARY INSTRUCTIONS

WHAT A PATENT IS AND HOW ONE IS OBTAINED²

This case involves a dispute relating to two United States patents. Before summarizing the positions of the parties and the issues involved in the dispute, let me take a moment to explain what a patent is and how one is obtained.

Patents are granted by the United States Patent and Trademark Office (sometimes called “the PTO”). A valid United States patent gives the patent holder the right for up to 20 years from the date the patent application was filed to prevent others from making, using, offering to sell, or selling the patented invention within the United States, or from importing it into the United States, without the patent holder’s permission. A violation of the patent holder’s rights is called infringement. The patent holder may try to enforce a patent against persons believed to be infringers by a lawsuit filed in federal court.

The process of obtaining a patent is called patent prosecution. To obtain a patent, one must first file an application with the PTO. The PTO is an agency of the Federal Government and employs trained Examiners who review applications for patents. The application includes what is called a “specification,” which contains a written description of the claimed invention telling what the invention is, how it works, how to make it, and how to use it. The specification concludes with one or more numbered sentences. These are the patent “claims.” If a patent is eventually granted by the PTO, the claims define the boundaries of its protection and give notice to the public of those boundaries.

After the applicant files the application, an Examiner reviews the application to determine whether or not the claims are patentable (appropriate for patent protection) and whether or not the specification adequately describes the invention claimed. In examining a patent application, the Examiner reviews certain information about the state of the technology at the time the application was filed. The PTO searches for and reviews information that is publicly

² FCBA A.1

available or that is submitted by the applicant. This information is called “prior art.” The Examiner reviews this prior art to determine whether or not the invention is truly an advance over the state of the art at the time. In general, prior art includes information that demonstrates the state of technology that existed before the claimed invention was made or before the application was filed. A patent lists the prior art that the Examiner considered; this list is called the “cited references.”

After the prior art search and examination of the application, the Examiner informs the applicant in writing of what the Examiner has found and whether the Examiner considers any claim to be patentable and, thus, would be “allowed.” This writing from the Examiner is called an “Office Action.” If the Examiner rejects the claims, the applicant has an opportunity to respond to the Examiner to try to persuade the Examiner to allow the claims, and to change the claims or to submit new claims. This process may go back and forth for some time until the Examiner is satisfied that the application meets the requirements for a patent and the application issues as a patent, or that the application should be rejected and no patent should issue. Sometimes, patents

are issued after appeals within the PTO or to a court. The papers generated during these communications between the Examiner and the applicant are called the “prosecution history.”

~~The fact that the PTO grants a patent does not necessarily mean that any invention claimed in the patent, in fact, deserves the protection of a patent. For example, the PTO may not have had available to it all other prior art that will be presented to you. In addition, there is the possibility that mistakes were made or that information was overlooked. Examiners have a lot of work to do and no process is perfect. Also, unlike a court proceeding, patent prosecution takes place without input from those who are later alleged to infringe the patent. A person accused of infringement has the right to argue in federal court that a claimed invention in the patent is invalid because it does not meet the requirements for a patent.~~

Commented [CMJ1]: Terves objects to including this paragraph because the issue of validity is not before the jury. The Court granted summary judgment of no invalidity for the unchallenged claims, and the parties agreed to dismiss the challenged claims without prejudice.

SUMMARY OF CONTENTIONS³

To help you follow the evidence, I will now give you a summary of the positions of the parties.

The parties in this case are plaintiff Terves, LLC (the patent owner), defendant Ecometal Inc., and Ecometal's owner defendant Nick Yuan. The case involves United States Patent Nos. 10,329,653 and 10,689,740, invented by Brian Doud, Nicholas Farkas, and Andrew Sherman (the "inventors"), and owned by their employer Terves. For your convenience, the parties and I will often refer to U.S. Patent No. 10,329,653 by the last three numbers of the patent number, namely, as the "'653 patent" and U.S. Patent No. 10,689,740 as the "'740 patent." These patents may also be referred to together as "the Terves Patents."

Terves filed suit in this court seeking money damages from Ecometal and Yuan for allegedly infringing the Terves Patents. I have already ruled that Ecometal and Yuan infringe the following claims by making, importing, using, selling, and/or offering for sale dissolvable cast magnesium: 2, 3, 9, 14, 15, 18-20, 23, 26, 27, 30, 31, 34, 35, 38, 39, 42, 46-47, 50, 52-54, 56-61, 64, 66, 67, and 76 of the '653 patent, and claims 3-5, 8-11, 13, 16-17, 20-47, 51-69, 76-93, and 95-103 of the '740 patent (collectively, the "Infringed Claims").

The magnesium alloys that infringe are: AJM006, AJM010, AJM012, AJM016, AJM017, AJM018, and AJM023. Collectively, these magnesium alloys will be referred to as "Infringing Alloys." I have also ruled in Terves' favor that Ecometal and Yuan failed to prove that the Infringed Claims are invalid. Therefore, you must accept the Infringed Claims as valid and patentable.

Your job will be to decide any money damages to be awarded to Terves to compensate it for the infringement. You will also need to make a finding as to whether the infringement

Commented [CMJ2]: As explained by Terves in the Joint Statement re issues remaining for trial (ECF #187), Terves believes the Court's Summary Judgment Order found that Ecometal and Nick Yuan are both infringers.

³ FCBA A.2

was willful. If you decide that any infringement was willful, that decision should not affect any damages award you give. I will take willfulness into account later.

PATENT AT ISSUE⁴

[AGREED]

As I stated, this case involves two patents: the '653 and '740 Patents. They both relate to dissolvable cast magnesium used to construct fracking tools that dissolve inside a gas or oil well after use.

⁴ FCBA A.3

OVERVIEW OF APPLICABLE LAW⁵

In deciding the issues I just discussed, you will be asked to consider specific legal standards. I will give you an overview of those standards now and will review them in more detail before the case is submitted to you for your verdict.

You will need to decide any money damages to be awarded to Terves to compensate it for the infringement. A damages award should put Terves in approximately the same financial position that it would have been in had the infringement not occurred, but in no event may the damages award be less than what Terves would have received had it been paid a reasonable royalty. I will instruct you later on the meaning of a reasonable royalty. The damages you award are meant to compensate Terves and not to punish Ecometal and Yuan. You may not include in your award any additional amount as a fine or penalty in order to punish Ecometal and Yuan. I will give you more detailed instructions on the calculation of damages at the conclusion of the case.

Commented [CMJ3]: For the reasons explained in Terves' opposition to Ecometal's motion in limine, the jury is statutorily required to award damages "in no event less than a reasonable royalty," 35 USC § 284, for patent infringement. (ECF #189 at PageID #15546-48). The Court should reject Ecometal's attempt to strike reasonable royalties from trial.

⁵ FCBA A.4

WHAT IS EVIDENCE⁶

[AGREED]

The evidence you are to consider in deciding what the facts are consists of:

1. the sworn testimony of any witness;
2. the exhibits that are admitted into evidence;
3. any facts to which the lawyers have agreed; and
4. any facts that I instruct you to accept as proved.

⁶ 9th Cir. 1.9.

{10238674;4 }

WHAT IS NOT EVIDENCE⁷

[AGREED]

In reaching your verdict, you may consider only the testimony and exhibits received into evidence. Certain things are not evidence, and you may not consider them in deciding what the facts are. I will list them for you:

(1) Arguments and statements by lawyers are not evidence. The lawyers are not witnesses. What they say in their opening statements, closing arguments and at other times is intended to help you interpret the evidence, but it is not evidence. If the facts as you remember them differ from the way the lawyers have stated them, your memory of them controls.

(2) Questions and objections by lawyers are not evidence. Attorneys have a duty to their clients to object when they believe a question is improper under the rules of evidence. You should not be influenced by the objection or by the court's ruling on it.

(3) Testimony that is excluded or stricken, or that you are instructed to disregard, is not evidence and must not be considered. In addition some evidence may be received only for a limited purpose; when I instruct you to consider certain evidence only for a limited purpose, you must do so and you may not consider that evidence for any other purpose.

(4) Anything you may see or hear when the court was not in session is not evidence. You are to decide the case solely on the evidence received at the trial.

⁷ 9th Cir. 1.10.

EVIDENCE FOR LIMITED PURPOSE⁸

[AGREED]

Some evidence may be admitted only for a limited purpose.

When I instruct you that an item of evidence has been admitted only for a limited purpose, you must consider it only for that limited purpose and not for any other purpose.

⁸ 9th Cir. 1.11.

DIRECT AND CIRCUMSTANTIAL EVIDENCE⁹

[AGREED]

Evidence may be direct or circumstantial. Direct evidence is direct proof of a fact, such as testimony by a witness about what that witness personally saw or heard or did. Circumstantial evidence is proof of one or more facts from which you could find another fact. You should consider both kinds of evidence. The law makes no distinction between the weight to be given to either direct or circumstantial evidence. It is for you to decide how much weight to give to any evidence.

⁹ 9th Cir. 1.12.

RULING ON OBJECTIONS¹⁰

[AGREED]

There are rules of evidence that control what can be received into evidence. When a lawyer asks a question or offers an exhibit into evidence and a lawyer on the other side thinks that it is not permitted by the rules of evidence, that lawyer may object. If I overrule the objection, the question may be answered or the exhibit received. If I sustain the objection, the question cannot be answered, and the exhibit cannot be received. Whenever I sustain an objection to a question, you must ignore the question and must not guess what the answer might have been.

Sometimes I may order that evidence be stricken from the record and that you disregard or ignore that evidence. That means when you are deciding the case, you must not consider the stricken evidence for any purpose.

¹⁰ 9th Cir. 1.13.

CREDIBILITY OF WITNESSES¹¹

[AGREED]

In deciding the facts in this case, you may have to decide which testimony to believe and which testimony not to believe. You may believe everything a witness says, or part of it, or none of it.

In considering the testimony of any witness, you may take into account:

- (1) the opportunity and ability of the witness to see or hear or know the things testified to;
- (2) the witness's memory;
- (3) the witness's manner while testifying;
- (4) the witness's interest in the outcome of the case, if any;
- (5) the witness's bias or prejudice, if any;
- (6) whether other evidence contradicted the witness's testimony;
- (7) the reasonableness of the witness's testimony in light of all the evidence; and
- (8) any other factors that bear on believability.

Sometimes a witness may say something that is not consistent with something else he or she said. Sometimes different witnesses will give different versions of what happened. People often forget things or make mistakes in what they remember. Also, two people may see the same event but remember it differently. You may consider these differences, but do not decide that testimony is untrue just because it differs from other testimony.

However, if you decide that a witness has deliberately testified untruthfully about something important, you may choose not to believe anything that witness said. On the other hand, if you think the witness testified untruthfully about some things but told the truth about others, you may accept the part you think is true and ignore the rest.

¹¹ 9th Cir. 1.14.

The weight of the evidence as to a fact does not necessarily depend on the number of witnesses who testify. What is important is how believable the witnesses were, and how much weight you think their testimony deserves.

CONDUCT OF THE JURY¹²

[AGREED]

I will now say a few words about your conduct as jurors.

First, keep an open mind throughout the trial, and do not decide what the verdict should be until you and your fellow jurors have completed your deliberations at the end of the case.

Second, because you must decide this case based only on the evidence received in the case and on my instructions as to the law that applies, you must not be exposed to any other information about the case or to the issues it involves during the course of your jury duty. Thus, until the end of the case or unless I tell you otherwise:

Do not communicate with anyone in any way and do not let anyone else communicate with you in any way about the merits of the case or anything to do with it. This includes discussing the case in person, in writing, by phone or electronic means, via email, text messaging, or any internet chat room, blog, website or application, including but not limited to Facebook, YouTube, Twitter, Instagram, LinkedIn, Snapchat, or any other forms of social media. This applies to communicating with your fellow jurors until I give you the case for deliberation, and it applies to communicating with everyone else including your family members, your employer, the media or press, and the people involved in the trial, although you may notify your family and your employer that you have been seated as a juror in the case, and how long you expect the trial to last. But, if you are asked or approached in any way about your jury service or anything about this case, you must respond that you have been ordered not to discuss the matter and report the contact to the court.

Because you will receive all the evidence and legal instruction you properly may consider to return a verdict: do not read, watch or listen to any news or media accounts or commentary about the case or anything to do with it, although I have no information that there will be news reports about this case; do not do any research, such as consulting dictionaries, searching the Internet, or using other reference materials; and do not make any investigation or in any other way

¹² 9th Cir. 1.15.

try to learn about the case on your own. Do not visit or view any place discussed in this case, and do not use Internet programs or other devices to search for or view any place discussed during the trial. Also, do not do any research about this case, the law, or the people involved—including the parties, the witnesses or the lawyers—until you have been excused as jurors. If you happen to read or hear anything touching on this case in the media, turn away and report it to me as soon as possible.

These rules protect each party's right to have this case decided only on evidence that has been presented here in court. Witnesses here in court take an oath to tell the truth, and the accuracy of their testimony is tested through the trial process. If you do any research or investigation outside the courtroom, or gain any information through improper communications, then your verdict may be influenced by inaccurate, incomplete or misleading information that has not been tested by the trial process. Each of the parties is entitled to a fair trial by an impartial jury, and if you decide the case based on information not presented in court, you will have denied the parties a fair trial. Remember, you have taken an oath to follow the rules, and it is very important that you follow these rules.

A juror who violates these restrictions jeopardizes the fairness of these proceedings, and a mistrial could result that would require the entire trial process to start over. If any juror is exposed to any outside information, please notify the court immediately.

NO TRANSCRIPT AVAILABLE TO JURY¹³

[AGREED]

I urge you to pay close attention to the trial testimony as it is given. During deliberations you will not have a transcript of the trial testimony.

¹³ 9th Cir. 1.17.

{10238674;4 }

TAKING NOTES¹⁴

[AGREED]

If you wish, you may take notes to help you remember the evidence. If you do take notes, please keep them to yourself until you go to the jury room to decide the case. Do not let notetaking distract you. When you leave, your notes should be left in the jury room. No one will read your notes.

Whether or not you take notes, you should rely on your own memory of the evidence. Notes are only to assist your memory. You should not be overly influenced by your notes or those of other jurors.

¹⁴ 9th Cir. 1.18.

BENCH CONFERENCES AND RECESSES¹⁵

[AGREED]

From time to time during the trial, it may become necessary for me to talk with the attorneys out of the hearing of the jury, either by having a conference at the bench when the jury is present in the courtroom, or by calling a recess. Please understand that while you are waiting, we are working. The purpose of these conferences is not to keep relevant information from you, but to decide how certain evidence is to be treated under the rules of evidence and to avoid confusion and error.

Of course, we will do what we can to keep the number and length of these conferences to a minimum. I may not always grant an attorney's request for a conference. Do not consider my granting or denying a request for a conference as any indication of my opinion of the case or of what your verdict should be.

¹⁵ 9th Cir. 1.20.

2.13 EXPERT OPINION¹⁶

You are about to hear testimony from [Dr. Lee Swanger, Dr. Dana Medlin, and David Haas], who will testify to their opinions and the reasons for their opinions. This opinion testimony is allowed, because of the education or experience of these witnesses.

Such opinion testimony should be judged like any other testimony. You may accept it or reject it and give it as much weight as you think it deserves, considering the witness's education and experience, the reasons given for the opinion, and all the other evidence in the case.

Commented [GA4]: The parties agree on the instruction, but Terves does not waive the right to object to the testimony of Dr. Medlin because the issues of infringement and invalidity are not before the jury.

¹⁶ 9th Cir. 2.13.

OUTLINE OF TRIAL¹⁷

[AGREED]

The trial will now begin. First, each side may make an opening statement. An opening statement is not evidence. It is simply an opportunity for the lawyers to explain what they expect the evidence will show.

The standard of proof that you will apply to the evidence is whether certain facts have been proven by a preponderance of the evidence. A preponderance of the evidence means that the fact that is to be proven is more likely true than not, that is, that the evidence in favor of that fact being true is sufficient to tip the scale, even if slightly, in its favor.

This standard is different from what you may have heard about in criminal proceedings where a fact must be proven beyond a reasonable doubt. On a scale of these two standards of proof, as you move from preponderance of the evidence, where the proof need only be sufficient to tip the scale in favor of the party proving the fact, to proof beyond a reasonable doubt, the fact must be proven to a very high degree of certainty.

After the opening statements, Terves will present its evidence in support of its request for damages and contention that the infringement has been and continues to be willful. Terves bears the burden to prove damages and willfulness by a preponderance of the evidence.

Ecometal and Yuan will then put on evidence responding to Terves' evidence of damages and willfulness.

¹⁷ FCBA A.5

Terves may then put on additional evidence responding to Ecometal's and Yuan's evidence. This is referred to as "rebuttal" evidence. Terves' "rebuttal" evidence may respond to any evidence offered by Ecometal and Yuan.

During the presentation of the evidence, the attorneys will be allowed brief opportunities to explain what they believe the evidence has shown or what they believe upcoming evidence will show. The attorneys' comments are not evidence and the attorneys are being allowed to comment solely for the purpose of helping you to understand the evidence.

After the evidence has been presented, the attorneys will make closing arguments and I will give you final instructions on the law that applies to the case. These closing arguments by the attorneys are not evidence. After the closing arguments and instructions, you will then decide the case.

INSTRUCTIONS AT THE CLOSE OF EVIDENCE

DUTY OF JURY¹⁸

[AGREED]

Members of the Jury: Now that you have heard all of the evidence and the arguments of the attorneys, it is my duty to instruct you on the law that applies to this case.

It is your duty to find the facts from all the evidence in the case. To those facts you will apply the law as I give it to you. You must follow the law as I give it to you whether you agree with it or not. And you must not be influenced by any personal likes or dislikes, opinions, prejudices, or sympathy. That means that you must decide the case solely on the evidence before you. You will recall that you took an oath to do so.

Please do not read into these instructions or anything that I may say or do or have said or done that I have an opinion regarding the evidence or what your verdict should be.

¹⁸ 9th Cir. 1.4.

DUTY TO DELIBERATE¹⁹

[AGREED]

Before you begin your deliberations, elect one member of the jury as your presiding juror. The presiding juror will preside over the deliberations and serve as the spokesperson for the jury in court.

You shall diligently strive to reach agreement with all of the other jurors if you can do so. Your verdict must be unanimous.

Each of you must decide the case for yourself, but you should do so only after you have considered all of the evidence, discussed it fully with the other jurors, and listened to their views.

It is important that you attempt to reach a unanimous verdict but, of course, only if each of you can do so after having made your own conscientious decision. Do not be unwilling to change your opinion if the discussion persuades you that you should. But do not come to a decision simply because other jurors think it is right, or change an honest belief about the weight and effect of the evidence simply to reach a verdict.

¹⁹ 9th Cir. 3.1.

CONSIDERATION OF EVIDENCE—CONDUCT OF THE JURY²⁰

[AGREED]

Because you must base your verdict only on the evidence received in the case and on these instructions, I remind you that you must not be exposed to any other information about the case or to the issues it involves. Except for discussing the case with your fellow jurors during your deliberations:

Do not communicate with anyone in any way and do not let anyone else communicate with you in any way about the merits of the case or anything to do with it. This includes discussing the case in person, in writing, by phone or electronic means, via email, via text messaging, or any internet chat room, blog, website or application, including but not limited to Facebook, YouTube, Twitter, Instagram, LinkedIn, Snapchat, or any other forms of social media. This applies to communicating with your family members, your employer, the media or press, and the people involved in the trial. If you are asked or approached in any way about your jury service or anything about this case, you must respond that you have been ordered not to discuss the matter and to report the contact to the court.

Do not read, watch, or listen to any news or media accounts or commentary about the case or anything to do with it, although I have no information that there will be news reports about this case; do not do any research, such as consulting dictionaries, searching the Internet, or using other reference materials; and do not make any investigation or in any other way try to learn about the case on your own. Do not visit or view any place discussed in this case, and do not use Internet programs or other devices to search for or view any place discussed during the trial. Also, do not do any research about this case, the law, or the people involved—including the parties, the witnesses or the lawyers—until you have been excused as jurors. If you happen to read or hear anything touching on this case in the media, turn away and report it to me as soon as possible.

²⁰ 9th Cir. 3.2.

These rules protect each party's right to have this case decided only on evidence that has been presented here in court. Witnesses here in court take an oath to tell the truth, and the accuracy of their testimony is tested through the trial process. If you do any research or investigation outside the courtroom, or gain any information through improper communications, then your verdict may be influenced by inaccurate, incomplete or misleading information that has not been tested by the trial process. Each of the parties is entitled to a fair trial by an impartial jury, and if you decide the case based on information not presented in court, you will have denied the parties a fair trial. Remember, you have taken an oath to follow the rules, and it is very important that you follow these rules.

A juror who violates these restrictions jeopardizes the fairness of these proceedings, and a mistrial could result that would require the entire trial process to start over. If any juror is exposed to any outside information, please notify the court immediately.

COMMUNICATION WITH COURT²¹

[AGREED]

If it becomes necessary during your deliberations to communicate with me, you may send a note through the clerk or bailiff, signed by any one or more of you. No member of the jury should ever attempt to communicate with me except by a signed writing. I will not communicate with any member of the jury on anything concerning the case except in writing or here in open court. If you send out a question, I will consult with the lawyers before answering it, which may take some time. You may continue your deliberations while waiting for the answer to any question. Remember that you are not to tell anyone—including the court—how the jury stands, whether in terms of vote count or otherwise, until after you have reached a unanimous verdict or have been discharged.

²¹ 9th Cir. 3.3.

SUMMARY OF CONTENTIONS²²

[AGREED]

As I did at the start of the case, I will first give you a summary of each side's contentions in this case. I will then provide you with detailed instructions on what Terves must prove to win on each of its contentions.

As I previously told you, Terves seeks money damages from Ecometal and Yuan for infringing the following claims of the Terves Patents: 2, 3, 9, 14, 15, 18-20, 23, 26, 27, 30, 31, 34, 35, 38, 39, 42, 46-47, 50, 52-54, 56-61, 64, 66, 67, and 76 of the '653 patent, and claims 3-5, 8-11, 13, 16-17, 20-47, 51-69, 76-93, and 95-103 of the '740 patent (collectively, the "Infringed Claims"). Again, the products that infringe are: AJM006, AJM010, AJM012, AJM016, AJM017, AJM018, and AJM023.

Your job is to decide any money damages to be awarded to Terves to compensate it for the infringement. You will also need to make a finding as to whether the infringement was willful. If you decide that any infringement was willful, that decision should not affect any damages award you make. I will take willfulness into account later.

²² FCBA B.1

PATENT CLAIMS²³

[AGREED]

Before you can decide the issues in this case, it may help you to understand the role of patent “claims.” The patent claims are the numbered sentences at the end of each patent. The claims are important because it is the words of the claims that define what a patent covers. The figures and text in the rest of the patent provide a description and/or examples of the invention and provide a context for the claims, but it is the claims that define the breadth of the patent’s coverage. Therefore, what a patent covers depends, in turn, on what each of its claims covers.

To know what a claim covers, a claim sets forth, in words, a set of requirements. Each claim sets forth its requirements in a single sentence. The requirements of a claim are often referred to as “claim elements” or “claim limitations.” The coverage of a patent is assessed claim- by-claim. When a thing (such as a product or a process) meets all of the requirements of a claim, the claim is said to “cover” that thing, and that thing is said to “fall” within the scope of that claim. In other words, a claim covers a product or process where each of the claim elements or limitations is present in that product or process.

To understand what each claim covers, the first step is to understand the meaning of the words used in the patent claim.

The law says that it is my role to define the terms of the claims and it is your role to apply my definitions of the terms I have construed to the issues that you are asked to decide in this case. Therefore, as I explained to you at the start of the case, I have determined the

²³ FCBA B.2 / 2.1

meaning of certain claim terms and I have provided to you my definitions of certain claim terms. You must accept my definitions of these words in the claims as being correct. It is your job to take these definitions and apply them to the issues that you are deciding.

The beginning portion, also known as the preamble, of some claims often use the word “comprising.” The word “comprising,” when used in the preamble, means “including but not limited to” or “containing but not limited to.” When “comprising” is used in the preamble, if an accused product includes all of the requirements of that claim, the claim is infringed. This is true even if the accused product contains additional elements.

For any words in the claim for which I have not provided you with a definition, you should apply the ordinary meaning of those terms in the field of the patent. You should not take my definition of the language of the claims as an indication that I have a view regarding how you should decide the issues that you are being asked to decide. These issues are yours to decide.

INDEPENDENT AND DEPENDENT CLAIMS²⁴

This case involves two types of patent claims: independent claims and dependent claims.

An “independent claim” sets forth all of the requirements that must be met in order to be covered by that claim. Thus, it is not necessary to look at any other claim to determine what an independent claim covers. In this case, claims 1, 12, 25, 29, 37, 41, 45, 49, 73, and 74 of the ’653 patent and claims 2, 19, and 94 of the ’740 patent are each independent claims.

The remainder of the claims in the Terves Patents are “dependent claims.” A dependent claim does not itself recite all of the requirements of the claim but refers to another claim for some of its requirements. In this way, the claim “depends” on another claim. A dependent claim incorporates all of the requirements of the claims to which it refers. The dependent claim then adds its own additional requirements. To determine what a dependent claim covers, it is necessary to look at both the dependent claim and any other claims to which it refers. A product that meets all of the requirements of both the dependent claim and the claims to which it refers is covered by that dependent claim.

Commented [CMJ5]: Defendants object to including this instruction. Terves believes this instruction should be included because some or all of the infringed claims are “dependent” claims, therefore, it would help the jury to understand what that means vis-a-vis “independent” claims.

²⁴ FCBA B.2 / 2.1a

INDIRECT INFRINGEMENT—ACTIVE INDUCEMENT²⁵
(AGAINST YUAN)

Terves alleges that Yuan is liable for infringement by actively inducing Ecometal and Ecometal customers to directly infringe the Terves Patents.

I have already ruled that making, importing, using, selling, and/or offering for sale the Infringing Alloys directly infringes the “Infringed Claims,” which I defined previously.

Yuan is liable for active inducement of infringement only if Terves proves by a preponderance of the evidence:

- (1) that Yuan took action during the time the Terves Patents was in force that was intended to cause and led to the infringing acts by Ecometal or Ecometal’s customers; and
- (2) that Yuan was aware of the Terves Patents and knew that the acts, if taken, would constitute infringement of that patent.

If you find that Yuan was aware of the patent, but believed that the acts it encouraged did not infringe that patent, Yuan cannot be liable for inducement under this theory.

In order to establish active inducement of infringement, it is not sufficient that Ecometal or its customers themselves directly infringe a claim. Nor is it sufficient that Yuan was aware of the act(s) by Ecometal or its customers that constitute the direct infringement. Rather, in order to find active inducement of infringement, you must find either that Yuan specifically intended Ecometal or its customers to infringe the Terves Patents or that Yuan believed there was a high probability that Ecometal or its customers would infringe the Terves Patents, but deliberately avoided learning the infringing nature of Ecometal’s or its customers’ acts. The mere fact, if true, that Yuan knew or should have known that there was a substantial risk that

Commented [CMJ6]: As explained in the April 20 Joint Statement, Terves believes the Court already granted summary judgment that Nick Yuan and Ecometal both infringe. Yuan disagrees. In the event the Court finds that Yuan has not yet been adjudged an infringer, Terves asserts this jury instruction as a theory of infringement liability against Nick Yuan.

Commented [CMJ7]: The standard jury instruction for active inducement requires that “[someone else] [some other company]” be the direct infringer that is “induced” by the defendant. Here, that direct infringer under this inducement theory is the Ecometal Inc. business and/or Ecometal’s customers that infringe by “making,” “using,” or “selling” the infringing product imported by Ecometal.

Defendant’s objection that “customers” are not relevant is not well taken because inducement requires proof that a customer or third-party infringed, and that the defendant induced that infringement by someone else.

Commented [CMJ8]: This makes clear the law of infringement, namely that any making, importing, using, selling, or offering to sell the infringing product is an act of direct infringement. Because the product has been declared infringing, Terves need not prove again that the sale of that product by Ecometal or its customers is direct infringement.

²⁵ FCBA B.3 / 3.2

Ecometal's or its customers' acts would infringe the Terves Patents would not be sufficient to support a finding of active inducement of infringement.

3.10 WILLFUL INFRINGEMENT²⁶

In this case, Terves argues that Ecometal and Yuan willfully infringed the Terves Patents. Since the Court found that that the Ecometal products and Yuan infringed, you must go on and address the additional issue of whether or not this infringement was willful. Willfulness requires you to determine whether Terves proved that it is more likely than not that Ecometal and Yuan knew of the Terves Patents and that the infringement by Ecometal and Yuan was intentional. You may not determine that the infringement was willful just because Ecometal and Yuan were aware of the Terves Patents and infringed it. Instead, you must also find that Ecometal and Yuan deliberately infringed the Terves Patents.

To determine whether Ecometal and Yuan acted willfully, consider all facts and assess Ecometal's and Yuan's knowledge at the time of the challenged conduct. Facts that may be considered include, but are not limited, to:

- (1) Whether or not Ecometal and Yuan acted consistently with the standards of behavior for its industry;
- (2) Whether or not Ecometal and Yuan intentionally copied a product of Terves that is covered by the Terves Patents;
- (3) Whether or not Ecometal and Yuan reasonably believed it did not infringe or that the patent was invalid;
- (4) Whether or not Ecometal and Yuan made a good-faith effort to avoid infringing the Terves Patents, for example, whether Ecometal and Yuan attempted to design around the Terves Patents; and

Commented [CMJ9]: Again, Terves believes summary judgment of Ecometal and Yuan's infringement was decided.

²⁶ FCBA B.3 / 3.10

(5) Whether or not Ecometal and Yuan tried to cover up its infringement.

ANTICIPATION²⁷

~~In order for someone to be entitled to a patent, the invention must actually be “new.” Ecometal contends that certain claims of Terves Patents are invalid because the claimed inventions are anticipated. Ecometal must convince you of this by clear and convincing evidence, i.e., that the evidence highly probably demonstrates that the claim(s) is/are invalid.~~

~~Specifically, Ecometal contended that Xiao anticipates certain claims of Terves Patents.~~

~~Anticipation must be determined on a claim by claim basis. Ecometal must prove by clear and convincing evidence that all of the requirements of a claim are present in a single piece of prior art. To anticipate the invention, the prior art does not have to use the same words as the claim, but all of the requirements of the claim must have been disclosed and arranged as in the claim. The claim requirements may either be disclosed expressly or inherently—that is, necessarily implied—such that a person having ordinary skill in the art in the technology of the invention, looking at that one reference, could make and use the claimed invention.~~

~~Where Ecometal is relying on prior art that was not considered by the PTO during examination, you may consider whether that prior art is significantly different and more relevant than the prior art that the PTO did consider. If you decide it is different and more relevant, you may weigh that prior art more heavily when considering whether the challenger has carried its clear and convincing burden of proving invalidity. If a dependent claim is anticipated by the prior art, then the claims from which it depends are necessarily anticipated as well.~~

Commented [CMJ10]: Terves objects to this instruction because anticipation is no longer in this case; the Court granted summary judgment of no invalidity on the “unchallenged” claims, and the “challenged” claims were voluntarily withdrawn by both parties without prejudice.

²⁷ FCBA B.4.3 / 4.3b-1

~~———— The Court found that Ecometal's accused products infringed the Terves Patents. However, Ecometal will contend that it did not think the Terves Patents will valid, and you will have to consider this standard to evaluate Ecometal's and Yuan's actions.~~

OBVIOUSNESS²⁸

Commented [CMJ11]: Terves objects to this instruction because obviousness is no longer in this case: the Court granted summary judgment of no invalidity on the “unchallenged” claims, and the “challenged” claims were voluntarily withdrawn by both parties without prejudice.

— Even though an invention may not have been identically disclosed or described before it was made by an inventor, in order to be patentable, the invention must also not have been obvious to a person of ordinary skill in the field of technology of the patent before the filing date of the patent.²⁹

— Ecometal may establish that a patent claim is invalid by proving, by clear and convincing evidence, that the claimed invention would have been obvious to persons having ordinary skill in the art at the time the patent was filed in the field of metallurgy.

— In determining whether a claimed invention is obvious, you must consider the level of ordinary skill in the field of the invention that someone would have had at the time the patent was filed, the scope and content of the prior art, any differences between the prior art and the claimed invention, and, if present, so-called objective evidence or secondary considerations, which I will describe shortly. Do not use hindsight; consider only what was known at the time of the patent’s filing date.

— Keep in mind that the existence of each and every element of the claimed invention in the prior art does not necessarily prove obviousness. Most, if not all, inventions rely on building blocks of prior art. In considering whether a claimed invention is obvious, you should consider whether, at the time of the patent’s filing date, there was a reason that would have prompted a person having ordinary skill in the field of the invention to combine the known

²⁸ ~~FBCA B.4.3 / 4.3e~~

²⁹ The “at the time invention was made” standard is used for patents that were filed before March 16, 2013. For patents filed on or after March 16, 2013, the appropriate standard is “before the effective filing date of the claimed invention.”

elements in the prior art in a way the claimed invention does, taking into account such factors as:

~~— (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s); (2) whether the claimed invention provides an obvious solution to a known problem in the relevant field; (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention; (4) whether the prior art teaches away from combining elements in the claimed invention; (5) whether it would have been obvious to try the combinations of elements, such as when there is a design incentive or market pressure to solve a problem and there are a finite number of identified, predictable solutions. To find it rendered the claimed invention obvious, you must find that the prior art provided a reasonable expectation of success. Obvious to try is not sufficient in unpredictable technologies.~~

~~— In determining whether the claimed invention is obvious, you should take into account any objective evidence (sometimes called “secondary considerations”) that may shed light on whether or not the claimed invention is obvious, such as:~~

- ~~a. Whether the claimed invention was commercially successful as a result of the merits of the claimed invention (rather than the result of design needs or market pressure advertising or similar activities);~~
- ~~b. Whether the claimed invention satisfied a long felt need;~~
- ~~c. Whether others had tried and failed to make the claimed invention;~~
- ~~d. Whether others invented the claimed invention at roughly the same time;~~
- ~~e. Whether others copied the claimed invention;~~

~~f. Whether there were changes or related technologies or market needs contemporaneous with the claimed invention;~~

~~g. Whether the claimed invention achieved unexpected results;~~

~~h. Whether others in the field praised the claimed invention;~~

~~i. Whether persons having ordinary skill in the art of the invention expressed surprise or disbelief regarding the claimed invention;~~

~~j. Whether others sought or obtained rights to the patent from the patent holder; and~~

~~k. Whether the inventor proceeded contrary to accepted wisdom in the field.~~

~~— In determining whether the claimed invention was obvious, consider each claim separately, but understand that if a dependent claim is obvious, then the claims from which it depends are necessarily obvious as well. —~~

~~The Court found that Ecometal's accused products infringed the Terves Patents. However, Ecometal will contend that it did not think the Terves Patents will valid, and you will have to consider this standard to evaluate Ecometal's and Yuan's actions.~~

INEQUITABLE CONDUCT³⁰

~~Inequitable conduct is an equitable defense to patent infringement that, if proved, bars enforcement of a patent. In order to prove inequitable conduct based on failure to disclose information, a defendant must show that the patent applicant (1) failed to disclose a known material reference; and (2) had a specific intent to deceive the USPTO. Materiality is proven by establishing that one of more of the claims within the patent would not have issues if the applicant had disclosed the withheld information. Intent to deceive requires the defendant to show that the applicant knew of the reference, knew it was material, and made a deliberate decision to withhold it.~~

Commented [CMJ12]: Terves objects to this instruction because inequitable conduct is no longer in this case: the Court granted summary judgment of no invalidity on the “unchallenged” claims, and the “challenged” claims were voluntarily withdrawn by both parties without prejudice.

Moreover, for the reasons cited in Terves’ motion to bifurcate, the taint of allowing an inequitable conduct defense at trial risks unfair prejudice to Terves, and confusing the jury.

³⁰ *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011) (*en banc*);

DAMAGES—INTRODUCTION³¹

Because the Court has already ruled that Ecometal and Yuan infringed the Terves Patents, you must consider what amount of damages to award to Terves. I will now instruct you about the measure of damages.

The damages you award must be adequate to compensate Terves for the infringement. They are not meant to punish an infringer. Your damages award, if you reach this issue, should put Terves in approximately the same financial position that it would have been in had the infringement not occurred.

Terves has the burden to establish the amount of its damages by a preponderance of the evidence. In other words, you should award only those damages that Terves establishes that it more likely than not has suffered. While Terves is not required to prove the amount of its damages with mathematical precision, it must prove them with reasonable certainty. You may not award damages that are speculative, damages that are only possible, or damages that are based on guesswork.

There are different types of damages that Terves may be entitled to recover. In this case, Terves seeks lost profits or a reasonable royalty. Lost profits consist of any actual reduction in business profits Terves suffered as a result of Ecometal's and Yuan's infringement. A reasonable royalty is defined as the money amount Terves and the Ecometal and Yuan would have agreed upon as a fee for use of the invention at the time just prior to when infringement began. But, regardless of the type of damages you may choose to award, you must be careful to ensure that award is no more and no less than the value of the patented invention.

³¹ FCBA B.5 / 5.1

Commented [CMJ13]: Ecometal objects to a reasonable royalty instruction. For the reasons explained in Terves' opposition to Ecometal's motion in limine, the jury is statutorily required to award "in no event less than a reasonable royalty," 35 USC § 284, for patent infringement. (ECF #189 at PageID #15546-48). The Court should reject Ecometal's attempt to strike reasonable royalties from trial.

I will give more detailed instructions regarding damages shortly. Note, however, that Terves is entitled to recover no less than a reasonable royalty for each infringing sale.

LOST PROFITS—“BUT FOR” TEST³²

To recover lost profits (as opposed to reasonable royalties), Terves must show a causal relationship between the infringement and Terves’ loss of profit. In other words, Terves must show that, but for the infringement, there is a reasonable probability that Terves would have earned higher profits. To show this, Terves must prove that, if there had been no infringement, it would have made some portion of the sales that Ecometal, Yuan, and their customers made of the infringing product.

Terves is entitled to lost profits if it establishes each of the following:

- (1) That there was demand for the patented product.
- (2) That there were no available, acceptable, noninfringing substitute products.
- (3) That Terves had the manufacturing and marketing capacity to make any infringing sales of patented products actually made by Ecometal, Yuan, and their customers and for which Terves seeks an award of lost profits—in other words, that Terves was capable of satisfying the demand.
- (4) The amount of profit that Terves would have made if Ecometal and Yuan had not infringed.

Commented [CMJ14]: Again, Terves believes the Court ruled at summary judgment that Yuan and Ecometal are infringers, Yuan disagrees.

Commented [CMJ15]: Ecometal objects to allowing the jury to consider sales by Ecometal’s customers, such as MMP, of fracking tools made of Ecometal’s infringing materials.

The law of lost profits, however, says that Terves may recover the lost profits that it suffered as a result of Ecometal’s infringement. Ecometal shipped 100% of the infringing material to MMP, which machined the material into fracking tools and sold them to customers, such as KLX Energy. But-for Ecometal’s infringement, Terves would have sold its own fracking tools made of its own patented material to those MMP customers. Thus, the amount of tooling made of infringing Ecometal material that customers purchased from MMP is relevant to determining Terves’ lost profits.

Terves explains more about this in its opposition to Ecometal’s opposition to motion in limine. (ECF #189 at PageID #15537-540.)

³² FCBA B.5 / 5.2

LOST PROFITS—DEMAND³³**[AGREED]**

Demand for the patented product can be proven by significant sales of a Terves' patented products or significant sales of an infringing product containing the patented features.

LOST PROFITS—NONINFRINGEMENT SUBSTITUTES—ACCEPTABILITY³⁴

To be an "acceptable, noninfringing substitute," a product must have the advantages of the patented invention that were important to people who purchased an infringer's product. If purchasers of an infringer's product were motivated to buy that product because of features available only from that product and a patent holder's patented product, then some other, alternative product is not an acceptable substitute, even if it otherwise competed with a patent holder's and an infringer's products. On the other hand, if the realities of the marketplace are that competitors other than Terves would likely have captured the sales made by the infringer and its customers, despite a difference in the products, then Terves is not entitled to lost profits on those sales.

Commented [CMJ16]: Ecometal's objection to considering sales of frac plugs and balls made of infringing Ecometal material—which are sales that Terves lost due to Ecometal's infringement—is not well taken as explained above.

LOST PROFITS—NONINFRINGEMENT SUBSTITUTES—AVAILABILITY³⁵**[AGREED]**

An alternative product may be considered "available" as a potential substitute even if the product was not actually on sale during the infringement period. Factors suggesting the alternative was available include whether the material, experience, and know-how to make or use the alleged substitute were readily available at the time of infringement. Factors suggesting the alternative was

³³ FCBA B.5/5.2.

³⁴ FCBA B.5/5.2..

³⁵ FCBA B.5/5.2.

not available include whether the material was of such high cost as to render the alternative unavailable and whether an infringer had to design or invent around the patented technology to develop an alleged substitute.

LOST PROFITS—CAPACITY³⁶

[AGREED]

Terves is only entitled to lost profits for sales it could have actually made. In other words, Terves must show that it had the manufacturing and marketing capability to make the sales it said it lost. This means Terves must prove it is more probable than not that it could have made and sold, or could have had someone else make or sell for it, the additional products it says it could have sold but for the infringement.

LOST PROFITS—AMOUNT OF PROFIT³⁷

[AGREED]

A patent holder may calculate its lost profits on lost sales by computing the lost revenue for sales it claims it would have made but for the infringement and subtracting from that figure the amount of additional costs or expenses it would have incurred in making those lost sales, such as cost of goods, sales costs, packaging costs, and shipping costs. Certain fixed costs that do not vary with increases in production or scale, such as taxes, insurance, rent, and administrative overhead, should not be subtracted from a patent holder's lost revenue.

³⁶ FCBA B.5/5.2.

³⁷ FCBA B.5/5.2.

LOST PROFITS — MARKET SHARE³⁸

If Terves establishes it would have made some, but not all, of an alleged infringer's sales but for the infringement, the amount of sales that Terves lost may be shown by proving Terves's share of the relevant market, excluding infringing products. A patent holder may be awarded a share of profits equal to its market share even if there were noninfringing substitutes available. In determining a patent holder's market share, the market must be established first, which requires determining which products are in that market. Products are considered in the same market if they are considered "sufficiently similar" to compete against each other. Two products are sufficiently similar if one does not have a significantly higher price than, or possess characteristics significantly different from, the other.

Commented [CMJ17]: Terves' expert, David Haas, is not using a "market share" analysis, so this instruction is superfluous.

³⁸ FCBA B.5/5.2; *State Indus., Inc. v. Mor Flo Indus., Inc.*, 883 F.2d 1573, 1557 (Fed. Cir. 1989); *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1218-19 (Fed. Cir. 1993); *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1124 (Fed. Cir. 2003); *Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1354-55 (Fed. Cir. 2001).

REASONABLE ROYALTY—ENTITLEMENT³⁹

Commented [CMJ18]: As explained more above, 35 USC 284 requires the jury to award “in no event less than a reasonable royalty” based on the evidence at trial.

Because the Court has already determined that a patent claim is infringed and not invalid, Terves is entitled to at least a reasonable royalty to compensate it for that infringement.

If you find that Terves has not proved its claim for lost profits or has proved its claim for lost profits for only a portion of the infringing sales, then you must award Terves a reasonable royalty for all infringing sales for which it has not been awarded lost profits damages.

³⁹ FCBA B.5 / 5.5

REASONABLE ROYALTY—DEFINITION⁴⁰

Commented [CMJ19]: As explained more above, 35 USC 284 requires the jury to award “in no event less than a reasonable royalty” based on the evidence at trial.

A royalty is a payment made to a patent holder in exchange for the right to make, use, or sell the claimed invention. A reasonable royalty is the amount of royalty payment that a patent holder and the infringer would have agreed to in a hypothetical negotiation taking place at a time prior to when the infringement first began. In considering this hypothetical negotiation, you should focus on what the expectations of the patent holder and the infringer would have been had they entered into an agreement at that time, and had they acted reasonably in their negotiations. In determining this, you must assume that both parties believed the patent was valid and infringed and that both parties were willing to enter into an agreement. The reasonable royalty you determine must be a royalty that would have resulted from the hypothetical negotiation, and not simply a royalty either party would have preferred. Evidence of things that happened after the infringement first began can be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation just prior to the first infringement.

⁴⁰ FCBA B.5 / 5.6

DAMAGES - LUMP SUM VS. RUNNING ROYALTY⁴¹

Commented [CMJ20]: As explained more above, 35 USC 284 requires the jury to award “in no event less than a reasonable royalty” based on the evidence at trial.

A reasonable royalty can be paid either in the form of a one-time lump sum payment or as a “running royalty.” Either method is designed to compensate the patent holder based on the infringer’s use of the patented technology. It is up to you, based on the evidence, to decide what type of royalty, if any, is appropriate in this case.

Reasonable royalty awards can take the form of a lump sum payment. A lump sum payment is equal to an amount that the infringer would have paid at the time of a hypothetical negotiation for a license covering all sales of the licensed product, both past and future. When a lump sum is paid, the infringer pays a single price for a license covering both past and future infringing sales.

Reasonable royalty awards may also take the form of a running royalty based on the revenue from or the volume of sales of licensed products. A running royalty can be calculated, for example, by multiplying a royalty base by a royalty rate, or by multiplying the number of infringing products or product units sold by a royalty amount per unit.

⁴¹ FCBA B5 / 5.7

REASONABLE ROYALTY—RELEVANT FACTORS⁴²

Commented [CMJ21]: As explained more above, 35 USC 284 requires the jury to award “in no event less than a reasonable royalty” based on the evidence at trial.

In determining the reasonable royalty, you should consider all the facts known and available to the parties at the time the infringement began. Some of the kinds of factors that you may consider in making your determination are:

- (1) The value that the claimed invention contributes to the accused product.
- (2) The value that factors other than the claimed invention contribute to the accused product.
- (3) Comparable license agreements or other transactions, such as those covering the use of the claimed invention or similar technology.

No one factor is dispositive and you can and should consider the evidence that has been presented to you in this case on each of these factors. You may also consider any other factors which in your mind would have increased or decreased the royalty the infringer would have been willing to pay and the patent holder would have been willing to accept, acting as normally prudent business people.

The so-called “Georgia-Pacific” factors, which can be considered in appropriate cases to inform the hypothetical negotiations, include the following:⁴³

- (1) The royalties received by the patentee for the licensing of the patent-in-suit, proving or tending to prove an established royalty.
- (2) The rates paid by the licensee for the use of other patents comparable to the patent-in- suit.

⁴² FCBA B.5 / 5.8

⁴³ The jury should be instructed only on the factors that are relevant to the evidence before the jury, such that this instruction should be revised after all evidence is in.

(3) The nature and scope of the license, as exclusive or nonexclusive, or as restricted or nonrestricted in terms of territory or with respect to whom the manufactured product may be sold.

(4) The licensor's established policy and marketing program to maintain his or her patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.

(5) The commercial relationship between the licensor and licensee, such as whether they are competitors in the same territory in the same line of business, or whether they are inventor and promoter.

(6) The effect of selling the patented specialty in promoting sales of other products of the licensee, the existing value of the invention to the licensor as a generator of sales of his nonpatented items, and the extent of such derivative or convoyed sales.

(7) The duration of the patent and the term of the license.

(8) The established profitability of the product made under the patents, its commercial success, and its current popularity.

(9) The utility and advantages of the patented property over the old modes or devices, if any, that had been used for working out similar results.

(10) The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by the licensor, and the benefits to those who have used the invention.

(11) The extent to which the infringer has made use of the invention and any evidence probative of the value of that use.

(12) The portion of the profit or of the selling price that may be customary in the particular business or in comparable business to allow for the use of the invention or analogous inventions.

(13) The portion of the realizable profits that should be credited to the invention as distinguished from nonpatented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

(14) The opinion and testimony of qualified experts.

(15) The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

DATE OF COMMENCEMENT OF DAMAGES—PRODUCTS⁴⁴

AGREED

In determining the amount of damages, you must determine when the damages began. Damages commence on the date that Ecometal and Yuan has both infringed and been notified of the alleged infringement of the Terves Patents:

If you find that a product has been sold or licensed, by Terves, that includes the claimed invention, you must determine whether that product has been “marked” with the patent number. “Marking” is placing either the word “patent” or the abbreviation “pat.” with the patent’s number on substantially all of the products that include the patented invention. The marking requirement may also be satisfied by including with the product an internet address to a posting that associates the patented articles with the number of the applicable patents. Terves has the burden of establishing that it substantially complied with the marking requirement. This means Terves must show that substantially all of the products made, offered for sale, or sold under the Terves Patents have been marked.

If Terves has not marked practicing products with the patent number, or if any licensees were not required to mark practicing products, you must determine the date that Ecometal and Yuan received actual notice of the Terves Patents and of the specific product alleged to infringe. Actual notice means that Terves communicated to Ecometal and Yuan a specific charge of infringement of the Terves Patents by a specific accused product or device. The filing of the complaint in this case qualified as actual notice, so the damages period begins no later than the date the complaint was filed.

⁴⁴ FCBA B.5 / 5.10

If you find that a product has not been sold under the Terves Patent or that products sold under the Terves Patents have been properly marked with the patent number, then the marking and notice requirements do not affect the damages period. If you find that the Terves Patents was granted before the infringing activity began, damages should be calculated as of the date you determine that the infringement began.

RETURN OF JURY VERDICT⁴⁵

[AGREED]

A verdict form has been prepared for you. [*Explain verdict form as needed.*] After you have reached unanimous agreement on a verdict, your foreperson should complete the verdict form according to your deliberations, sign and date it, and advise the [clerk] [bailiff] that you are ready to return to the courtroom.

Respectfully submitted,

Dated: April 20, 2022

s/ David B. Cupar
David B. Cupar (OH 0071622)
Matthew J. Cavanagh (OH 0079522)
Andrew D. Gordon-Seifert (OH 0092499)
MCDONALD HOPKINS LLC
600 Superior Avenue, East, Ste. 2100
Cleveland, Ohio 44114
t 216.348.5400 | f 216.348.5474
dcupar@mcdonaldhopkins.com
mcavanagh@mcdonaldhopkins.com
agordon-seifert@mcdonaldhopkins.com

Counsel for Terves LLC

⁴⁵ 9th Cir. 3.5